

demonstrated to work runs the risk of prematurely eliminating the major incentive for BellSouth to cooperate with its would-be rivals.

B. South Carolina Application

Applying these principles to BellSouth's South Carolina application shows clearly that approval of this application by the Commission under Track A would be unwarranted. The record shows clearly that local exchange competition in South Carolina remains a prospect, not a reality. The Section 271 authorization process should be used to help turn that prospect into reality. Given the *de minimis* state of local competition in South Carolina, in-region long-distance authorization in South Carolina is not in the public interest absent a clear showing that entry barriers into local exchange markets relating to interconnection with BellSouth truly have been eliminated.

Detailing the specific interconnection items in dispute, and evaluating the extent to which BellSouth's shortcomings have contributed to the disputes, is beyond the scope of my testimony, but the record indicates that important interconnection issues, both technical and economic, remain unresolved. Even with the best of intentions by BellSouth, the fact remains that BellSouth's economic incentives are to protect its monopoly, not to enable local competition. Since the conditions of local competition in South Carolina are so new and untested by actual commercial use, prudence favors deferring in-region long-distance authorization for BellSouth until the Commission can assert with

confidence that local entry through a variety of business strategies has truly been enabled through BellSouth's interconnection provisions.

I appreciate that BellSouth is arguing that it has indeed opened its local markets to competition, and should not be kept out of long-distance markets merely because CLECs are slow to enter. If conditions were truly and reliably in place for local competition to thrive, and independent business decisions of would-be CLECs alone were delaying that competition, Track B approval would indeed serve the public interest. I cannot conclude based on the record that South Carolina today fits this description. As I discuss below, important aspects of interconnection do not yet appear to be reliably in place in South Carolina. BellSouth suggests that the lack of entry into local exchange markets in South Carolina solely reflects a lack of interest in these markets by CLECs.² However, it makes little economic sense for Sprint and other CLECs to invest heavily to serve the South Carolina market, knowing that the necessary interconnection is not yet available.

BellSouth further argues that potential local competitors are tailoring their entry efforts to "keep the Bell companies out of long distance," and it encourages this Commission to "break the logjam by authorizing interLATA competition under Track B." (BellSouth Brief at p. iii) Given the problems experienced by Sprint and others interconnecting with BellSouth in other BellSouth states, I do

² Brief in Support of Application by BellSouth for Provision of In-Region InterLATA Services in South Carolina, Before the Federal Communications Commission, September 30, 1997, ("BellSouth Brief") page 14-15.

not see how BellSouth can credibly claim that such strategic concerns alone are driving entry decisions in South Carolina. Furthermore, the experiences of non-IXC CLECs, such as ACSI, are quite informative in this regard, as they have no economic incentive to keep BellSouth out of the long distance market.

I am also concerned that granting BellSouth's request at this time would not only remove much of the pressure on BellSouth to truly cooperate and open up its local exchange markets, but would further send a signal to other BOCs that they can gain in-region long-distance authority without truly opening up their local markets to competition. This would be contrary to the public interest.

II. Economic Objectives in Section 271 Applications: General Principles

There are three major economic and policy objectives that must be balanced in evaluating BOC Section 271 applications to offer in-region long-distance service. Ultimately, determining whether in-region interLATA authorization for BellSouth would be consistent with the public interest, convenience, and necessity turns on the impact of authorization in these three areas. These factors are: (1) expansion of consumer choice in local markets; (2) increasing competition in interLATA markets; and (3) leveling the playing field as markets merge.

A. Opening Local Exchange Markets to Competition

My testimony focuses on the first factor, namely the impact on local exchange competition in South Carolina of approving or denying BellSouth's

application. The 1996 Telecommunications Act provides an historic chance to open up local exchange markets, which are the most significant remaining bottleneck monopolies in the telecommunications sector. If our experience in long-distance markets is any guide, the introduction of competition into local exchange markets will generate substantial consumer benefits in the form of new services and lower prices, once a variety of thorny interconnection issues are worked out.

Introducing competition into local exchange services will require the cooperation of the ILECs. This cooperation is unlikely to be voluntary; no monopolist, regulated or not, is keen to relinquish its dominant position. Furthermore, direct regulation of BellSouth's conduct in and of itself is a highly imperfect means of ensuring viable local competition — there is too much scope for BellSouth to get around the spirit if not the letter of the interconnection rules, and to impose its own interpretation of its interconnection duties. This danger is greatest before the many aspects of interconnection are tested in practice and understood by competitive local exchange carriers and regulators alike. So long as Section 271 authorization remains pending, BellSouth has incentives to fix posthaste problems with CLECs; once Section 271 authorization is granted, BellSouth will have fewer incentives to quickly resolve disputes over the myriad details of interconnection, although CLECs will remain heavily dependent upon BellSouth. This highly asymmetric situation would not be conducive to

resolving the many interconnection issues that are vital to making local exchange competition a reality.

The implication of this analysis is that the path to genuine local competition will be far smoother if BellSouth, and the other BOCs, are given incentives to partially offset their natural economic incentives to protect their monopoly positions and to cooperate in making local competition truly possible. By insisting, as a condition for entry into in-region interexchange service, that BellSouth demonstrate that it has truly put in place the conditions necessary for local competition to flourish, the Section 271 process can be used to induce cooperation. This *quid pro quo* is central to the development of local exchange competition.

There is some specific evidence confirming the importance of this incentive structure. It is my understanding that local competition is no further advanced in local service areas served by Southern New England Telecommunications Corporation (SNET) and by GTE than in the BOC service areas generally.³ Yet BellSouth would have us believe that 271 relief will speed local exchange competition in South Carolina. (BellSouth Brief at p. 102-103) The experiences of SNET and GTE provide scant evidence to support such a view.

³ There is admittedly inconclusive evidence that unbundled network elements (UNEs) are considerably more expensive in GTE's and SNET's service areas. The average loop price in GTE's service areas, at \$18.92, is the highest average loop price among the major LECs and, on average, is almost 40% higher than the FCC proxy rates in those regions. SNET's loop price is over 20% higher than the FCC proxy rate for Connecticut. See "The Status of Agreements Between the Major LECs and CLECs - Update," by Kristin Burns and Anna-Maria Kovacs, Janney Montgomery Scott (JMS), May 23, 1997.

B. Impact on Competition in Long-Distance Markets

Long-distance entry by BellSouth is not just a reward for providing meaningful interconnection with local rivals; it has direct implications for long-distance markets. If BellSouth can be prevented from misusing its bottleneck local monopoly to disadvantage its long-distance rivals, then permitting BellSouth to enter the long-distance market will render that market more competitive. One reason to insist that local competition has truly been enabled before granting Section 271 authorization is to reduce the dangers of such misuse.

In any overall balancing of impacts on local and long-distance markets, it is important to remember that the U.S. long-distance marketplace is currently far more competitive than are local exchange markets served by BellSouth. On this basis, the incremental benefits of entry into long distance are very likely to be smaller than the corresponding benefits from entry into the local exchange. This is especially so given that local access serves as an input into the provision of long-distance service; the benefits from increased competition and possible technological innovations in local exchange services can be expected to flow through, in part, to long-distance markets.

Three considerations may limit any benefits to consumers in long-distance markets from BellSouth's entry into those markets. First, there is some danger that BellSouth will use its bottleneck local monopoly to reduce competition in long distance. Second, the benefits from adding another competitor to the long-

distance market are muted in comparison with adding a competitor to the monopolized local market. Third, to the extent that BellSouth will be a reseller of long-distance services rather than a facilities-based competitor, its impact on long-distance markets is less pronounced.

I have reviewed the testimony put forward by Mr. Raimondi of WEFA regarding the predicted benefits to South Carolina consumers of granting BellSouth's application. As with any forecasting model, the results are no better than the assumptions going into the model. Mr. Raimondi simply *assumes* that long-distance service prices fall 25% below the baseline forecast by 2001 due to BellSouth's entry into long-distance markets, that BellSouth's entry will cause productivity gains and quality improvements of 2% per year, and that it would increase the labor force participation rate by 0.5% over the next ten years. Obviously, these types of changes would be beneficial to consumers and the State of South Carolina generally. The key question that the SCPSC, and the FCC, will have to address is whether *immediate* approval is better than waiting until BellSouth has done more to enable local exchange competition. Even assuming that the Commission concludes that BellSouth's entry into long distance markets will generate some benefits, those benefits must be balanced against the potential for harm from a reduction in competition in local exchange (and access) markets. Mr. Raimondi's analysis is at best incomplete in failing to address this key tradeoff.

In fact, I suspect that Mr. Raimondi's own model could easily be used to strengthen my conclusions: if BellSouth is not compelled to truly open its local exchange markets to competition, the South Carolina economy could suffer substantial harm, relative to forcing open those markets. Furthermore, mistaken approval of a Section 271 application by BellSouth could delay local competition for years to come, while denial of an otherwise proper application that lacks sufficient documentation to prove local exchange markets are open to competition will delay the benefits Mr. Raimondi anticipates by only a matter of months, until another application can be filed and approved. Mr. Raimondi stated before the SCPSC that the WEFA study does not attempt to evaluate whether benefits to the long distance market will be foregone entirely or simply delayed if BellSouth does not enter the interLATA market immediately. However, he does acknowledge that, while there is a "time value of money", if BellSouth enters three months later than the WEFA study assumes, "then the benefits will be put off for that three month period." (Raimondi, App. C, Vol. 5, at p. 71)

C. Bundling Parity

There appears to be industry consensus that many consumers will value the ability to purchase a wide range of services - such as local, long distance, and wireless - from a single vendor.⁴ There seems little doubt that many industry

⁴ See BellSouth Brief at 80-82, and the Affidavit of Richard J. Gilbert.

participants are planning to market bundles of services. I anticipate that the marketing of bundles of telecommunications services to high-volume users will be especially intense.

As we look ahead to widespread competition and converging markets, firms that are unable to offer key pieces of attractive bundles will be at a competitive disadvantage. Therefore, parity in the ability to bundle services will be important to full competition in the future.

Other things being equal, the public interest militates against giving one firm or a group of firms a significant head start in offering bundled services, especially if those firms can rapidly gain market share by marketing the bundled services. The recent experiences of SNET and GTE demonstrate that entry into interLATA markets by ILECs can be achieved swiftly. In contrast, significant competition in local exchange markets remains unproven, in South Carolina and elsewhere. This view is supported in the testimony of Alfred Kahn and Timothy Tardiff, who state that "...whereas the rules for entry by competitors into the local exchange market are still in the process of being hammered out, the arrangements for fair access by the long distance carriers to the facilities of the BOCs have been in place *for upwards of a decade.*"⁵

My public interest analysis is consistent with the public interest objective of promoting bundling parity. If the Commission concludes that BellSouth can

⁵ Affidavit of Alfred E. Kahn and Timothy J. Tardiff, Application of SBC Communications Inc. for Provision of In-Region InterLATA Services in Oklahoma, Before the Federal Communications Commission, CC Docket No. 97-121, p. 27 (emphasis in original).

rapidly and reliably enter in-region long-distance markets once authorized to do so, and if the Commission concludes that there is far greater uncertainty about the ability of CLECs to effectively offer local service, at least until a myriad of details involving interconnection are resolved, the goal of a “level playing field” as markets converge mandates denying in-region authorization until local competition has truly been enabled, and then promptly granting such authorization (assuming the other conditions of the Act are also met by the application).

Full bundling parity will only be achieved once access charge reform is completed. So long as access charges remain above incremental costs, BellSouth will have an artificial cost advantage over other interexchange carriers in serving incremental interexchange business. In seeking business that adds to total long-distance calling, BellSouth will account for the true incremental cost of providing access for an additional minute of long-distance calling. In contrast, all other carriers seeking that same business must include in their costs the higher access charges they owe to BellSouth when they provide an additional long-distance minute. This logic is not altered by structural separation and imputation requirements.

D. Uncertainty Favors Delay

In balancing the three economic objectives I described earlier, it is important to remember that uncertainty favors deferring Section 271 authority

until we can be confident that local competition has truly been enabled. Once approval has been granted, it will be nearly impossible to rescind as a practical matter. On the other hand, if approval is denied, the BOC can put in another application as soon as conditions have changed to warrant approval knowing it will receive a response within 90 days. The Commission should *not* regard its decision in response to Section 271 applications such as BellSouth's current application in South Carolina as a once-and-for-all choice of whether to authorize BellSouth to provide in-region long-distance services. Rather, the Commission should ask whether the public interest is better served by delaying approval until additional conditions are met.

III. Local Exchange Competition: General Principles

I turn now to apply the economic and public interest framework described above to BellSouth's South Carolina application, focusing largely on my first factor - the goal of opening local exchange markets to competition.

The key question in my analysis is this: Has BellSouth taken the necessary steps to enable genuine local exchange competition to flourish? If not, approval of BellSouth's application will predictably and adversely affect progress towards true local exchange competition, both in South Carolina and elsewhere, contrary to the public interest.

In assessing current and prospective local exchange competition, two distinctions are crucial. First, one must distinguish *actual* competition from

potential competition. Second, one must distinguish CLECs based on their entry strategies and based on their assets: facilities-based competition is qualitatively different from competition based on leased elements, which in turn differs from pure resale competition. Applying this tripartite division is complicated by the fact that given CLECs can and will adopt different approaches in providing services to local exchange customers, both across geographic regions and across time.

A. Actual vs. Potential Competition

By far the strongest proof of the feasibility of local exchange competition is the actual presence of significant facilities-based local competitors, *i.e.*, actual competition over independent facilities. The more widespread is local competition, the more it takes place over facilities outside the control of the ILEC, and the greater the number of actual CLECs, the more confident we can be that conditions are truly conducive to entry and expansion by CLECs.

Actual competition can in principle be measured through market shares, capacity levels, and the like. Having said this, I am keenly aware that the Act does not require any minimum market share for CLECs before in-region authorization can be granted. Indeed, to do so would mute the Bell Company's incentives to compete aggressively to retain market share in the face of new entry.

In the light of this fact, and given the severely limited state of actual local competition in South Carolina today, my analysis necessarily focuses on the prospects for genuine local competition in the near future. In significant part, this involves an assessment of the remaining entry barriers into local exchange markets in South Carolina, and the extent to which BellSouth can affect the height of the remaining barriers. In economic terms, I ask whether the barriers to entry into local markets in South Carolina, or at least those barriers associated with interconnection with BellSouth, have truly been substantially eliminated. Based on the available record, I cannot conclude that these barriers have indeed been eliminated.

B. The Importance of Facilities-Based Competition

Whether looking at actual or potential competition in local exchange markets, facilities-based competition is especially important. CLECs with their own facilities have made substantial sunk investments to serve the market, and are thus committed to an ongoing market presence. Facilities-based competition also is superior to resale competition because it represents far greater competitor independence of the ILEC. Ultimately, for regulation to wither away and give way to competition will require the presence of strong, facilities-based competitors to BellSouth. Investments in alternative local loop facilities would be especially significant, as these facilities represent a lasting commitment to the

local market. Congress expected these investments would be made, and repeatedly gave the example of cable facilities.

Facilities-based competitors also represent alternative sources of access services. Resellers do not serve this function. Widespread competition in the provision of access will help ensure that interexchange markets remain competitive after BOC entry.

Competition based on the leasing of network elements is not nearly as significant as true facilities-based competition. A CLEC who is leasing elements from the incumbent local exchange carrier clearly remains heavily reliant on the incumbent carrier. Additionally, the necessary sunk investments, and thus the CLEC's commitment to the market associated with leasing network elements, are far lower than those required of a CLEC building its own loop plant.

Nevertheless, leased elements are preferable to resale in terms of offering competition to the ILEC. First, CLECs who are leasing network elements can offer competition along a number of dimensions that resellers cannot. Second, resale rates are not based on the underlying costs of the facilities, so resale competition does relatively little to drive retail rates down towards cost.

I would hope that all parties can agree that resale, while offering valuable competition over some aspects of service (such as marketing, billing, or customer service), is inherently limited and less meaningful than the provision of service through the leasing of unbundled network elements. Professors Harris and Teece, in their affidavit on behalf of Ameritech Michigan, appear to agree with

this, stating that “for purposes of competitive assessment, self-supplied facilities and leased unbundled network elements...are clearly distinct from resale of services over the incumbent’s facilities.”⁶ Nonetheless, competition through the use of unbundled network elements is not a substitute for facilities-based competition.

For the purposes of competitive assessment, a key issue is whether one firm is dependent upon its *competitors* for key inputs. Clearly, CLECs who are leasing elements from BellSouth remain heavily dependent upon BellSouth to provide service, contractual and regulatory protections notwithstanding. The Justice Department routinely recognizes in merger analysis that firms dependent upon their rivals for key inputs, *e.g.*, through a supply agreement designed to fix an anticompetitive problem associated with an acquisition, typically are not as strong a competitive force as those who are truly independent. Competition from firms who rely upon a rival for a key input, and whose basic ability to offer services is dependent upon contractual rights imposed unwillingly on a direct rival, are generally not “economically equivalent” to fully independent rivals.

C. General Principles: Is Competition Enabled?

One important indicator of imminent competition in local exchange markets is the expenditure of significant non-recoverable (sunk) investments by CLECs.

⁶ Joint Affidavit of Robert G. Harris and David J. Teece On Behalf of Ameritech Michigan, in the matter of Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Service in Michigan, Before the Federal Communications Commission, CC Docket No. 97-137, p. 15.

Such investments constitute a vote of confidence that competition is feasible, by those with a direct financial stake in making competition a reality. Having acknowledged the economic importance of sunk investments, I must emphasize that the presence of some sunk investments by some carriers does not itself suffice to demonstrate that local markets have been opened to competition, or that these investments will lead to significant competition, for two reasons. First, it would be contrary to the public interest for these investments to be stranded or devalued by problems implementing interconnection with BellSouth. Any sunk investments that have been made will remain at risk until it has been proven that the entrants can indeed rely on BellSouth to provide critical inputs in a non-discriminatory manner. Such problems are less likely to arise if BellSouth is permitted to enter long-distance markets only after the required aspects of interconnection have been proven to work in practice on a commercial scale. By deferring Section 271 authorization until BellSouth has demonstrated its cooperation, local competition is enhanced, entrants' investments are partially protected from exclusionary tactics by BellSouth, and further investments by CLECs are encouraged.

Second, not all sunk expenditures to provide local telephone services are specific to those services. Investments in facilities that also jointly provide access services and exchange services, such as those of ACSI, are less meaningful in inferring that entry barriers into local exchange markets have been lowered than investments in fully specific assets. In other words, when evaluating the

significance of sunk investments for assessing market participants' beliefs about the feasibility of local exchange competition, it is important to account for the entire range of services provided by those investments. Due to the presence of economies of scope in the provision of access and exchange services, some investments in local facilities may be recoverable through provision of access services, and not reliant on the full range of interconnection necessary to a CLEC. Indeed, much of the investment in downtown fiber networks, in South Carolina and nationally, has been undertaken to provide access services, not exchange services.

In local exchange markets, barriers to growth may be at least as important as barriers to entry. By "barriers to growth," sometimes referred to in the literature as "barriers to mobility," I mean market conditions that impede the ability of market participants to compete effectively and add new customers or services. After all, even if a firm has made some investments in the local exchange market and entered that market, its ability to compete and attract customers may still be limited by BellSouth's conduct, *e.g.*, if BellSouth provides the firm with inferior repair and maintenance services or if BellSouth has limited ability to process new orders or to provide billing information.

Due to the complexity and importance of interconnecting in various ways with the ILEC, it is very difficult to be confident that entry truly has been enabled in Louisiana until interconnection has been shown to work in practice on a commercial scale, encompassing a range of interconnection issues that are

meaningful to CLECs with diverse entry strategies. In demonstrating that interconnection in its myriad details really works, an interconnection agreement with a CLEC covering a large geographic area is more convincing and more meaningful than an agreement with a highly localized CLEC.

In order for entry to be feasible, and for CLECs to be willing to make the additional necessary investments to provide genuine competition, potential entrants need to be confident that workable systems are in place on a commercially viable scale. Thus, checklist compliance has to mean more than having something on paper. To be economically meaningful, the details must be worked out in practice and agreements must be fully implemented. There are a great many details that really matter for the commercial viability of CLECs. For many of the terms of interconnection, the interests of BellSouth and CLECs are directly opposed. All of this implies that it is highly desirable to provide BellSouth with ongoing incentives to cooperate, in the form of withholding the long-distance entry "prize," until such cooperation has been definitely elicited and shown to truly enable entry.

Interconnection arrangements or offers that are ambiguous, inadequate, or incomplete for CLECs' needs will hinder local competition. Absent reliable, working interconnection arrangements, CLECs will be wary of making the substantial sunk investments necessary to participate fully in local markets, and the investments CLECs do make will remain at risk. This is certainly true for facilities investments, which are largely non-recoverable in the event that

interconnection problems arise, and thus will depreciate in value if the terms or conditions of interconnection fail to achieve operational parity between CLECs and the ILEC.

Shapiro Appendix B

Appendix B

Average Minutes of Use in Louisiana

Louisiana Average Minutes of Use per Line - All Lines

Source: 1997 FCC Monitoring Report, Tables 4.15 - 4.19.

Most recent data is 1995.

	Minutes of Use (all years)	Minutes of Use (1995 only)	Local Lines	Ratio of Local to Total Minutes of Use
Local	44,238,364,000	3,686,530,333	2,265,803	1627
Intrastate	3,349,844,000	279,153,667	2,265,803	123
Interstate	6,262,637,000	521,886,417	2,265,803	230
Total	53,850,845,000	4,487,570,417	2,265,803	1981

Local Minutes for Every Intrastate Minute:

13.2

Shapiro Appendix C

Appendix C

PCS Wireless and BellSouth Wireline Rate Plans

PCS Wireless Plans

Source: NERA study, submitted with Affidavit of Aniruddha Banerjee in this proceeding.

Plans marked with "*" were not considered in NERA study. These plan rates were cited in 10/8/97 Robinson-Humphrey Company LLC report entitled "PCS vs. Cellular: Quarterly Survey."

Company	Plan Name	Monthly Rate	Minutes	Rate per Minute
Sprint PCS	10 Minute	\$ 20.00	10	\$ 0.40
	60 Minute	\$ 39.00	60	\$ 0.35
	60 Minute	\$ 50.00	120	\$ 0.30
	400 Minute*	\$ 40.00	400	\$ 0.35
	600 Minute*	\$ 60.00	600	\$ 0.20
PrimeCo	Clear Choice 1	\$ 18.00	0	\$ 0.28
	Clear Choice 100	\$ 40.00	100	\$ 0.26
	May-June Promo	\$ 11.95	0	\$ 0.30
	July Promo	\$ 44.95	300	\$ 0.26
	500 Minute*	\$ 49.95	500	\$ 0.20
	1200 Minute*	\$ 120.00	1200	\$ 0.15

BellSouth Wireline Plans

Source: NERA study, submitted with Affidavit of Aniruddha Banerjee in this proceeding.

Plan	Rate	Features
1FR	\$12.64	
IntraLATA	\$0.25	
Area Plus	\$31.00	1FR plus extended area calling;
Complete Choice	\$29.00	1 FR plus 5 vertical features
Area Plus + Complete Choice	\$45.00	1FR, extended area, and 5 vertical features
Call waiting	\$2.61	
Call forwarding	\$2.61	
3 way calling	\$2.61	
Caller ID	\$6.00	
Voicemail	\$7.95	

All PCS plans come with voicemail, call waiting, balance alert, summary and check billing, call log, numeric paging and first incoming minute free.

Shapiro Appendix D